Counting AdS Vacua

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Abstract

How many AdS vacua exist with no massive states below a given cutoff μ? Taking a bird's eye view over all string theory vacua, we find that most classes display a power-law growth as μ tends to zero. The exception comes from constructions that admit many brane charge choices, naively leading to an exponential growth. Taking into account moduli and tachyons suggests however a natural weight by the volume of field theory space, which damps the exponentials to power laws again. Vacua with a small number of light fields dominate in this measure.

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